

Application Serial No. 10/586,844
Reply to Office Action of May 28, 2008

PATENT
Docket: CU-4895

REMARKS

In the Office Action, dated May 28, 2008, the Examiner states that Claims 11-30 are pending and rejected. By the present Amendment, Applicant amends the claims.

1. Rejection of Claims 11-30 under 35 U.S.C. 103(a)

Claims 11-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeon et al. (WO 2004/068225) in view of Haim et al. (US Patent 6,593,981) for the reasons of record. Applicant respectfully disagrees with and traverses this rejection.

At the outset, Applicant has Incorporated Claim 12 into Claim 11 and cancelled Claims 12, 14 and 16, which depend from Claim 12. Applicant has also incorporated Claim 20 into Claim 17 and cancelled Claims 20-22 and Claims 26 and 30, which are dependent upon Claim 20. All such amendments and cancellations were made solely in the interest of advancing prosecution and without prejudice or disclaimer of the subject matter thereof. Applicant respectfully asserts that the amended claims are not obvious over Jeon in view of Haim.

The color filter with a retardation layer recited in amended Claim 11 comprises a colored layer that includes a plurality of rows of light transmissive patterns, whose thickness differs according to its color; and a first retardation layer, formed on the colored layer and made of liquid crystalline polymer, and which functions as a C plate. One of the features of the present invention is the forming of the first retardation layer on the colored layer.

Further, the second retardation layer of the color filter with a retardation layer recited in the present invention functions as a positive A plate and a refractive index anisotropy thereof in a visible light range becomes smaller with a shorter wavelength. That is, another feature of the present invention is the "second retardation layer having inverse dispersion characteristics" (page 10 line 3-page 12 line 2 of the specification, and FIG. 1).

Conventionally in the art, there has been a problem that the retardation amount required to the retardation layer differs depending on every wavelength, in the case of carrying out the optical compensation over the entire visual light range at a certain observation angle. Further, in the case of the optical compensation using the retardation layer, since the wavelength dependency of the retardation amount is determined by the characteristics of the material comprising the retardation layer, the

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optical design is generally provided with a green color, which has the highest visual sensitivity. Therefore, in such cases, since the accurate optical compensation cannot be realized for the red color and the blue color, when the visual angle is made larger in the black display state, the light leakage of the red color and the blue color becomes conspicuous. This results in a major problem because the red and blue are observed as colors such as a reddish purple color (page 3 lines 9-23 of the specification).

In the present invention, the retardation amount corresponding to the wavelength of each color can be obtained by having the above-mentioned features of the "retardation layer whose thickness differs according to its color" and the "retardation layer having inverse dispersion characteristics." Thereby, the present invention can attain an advantageous effect of effectively restraining the light leakage in the all wavelength region to obtain a high contrast high quality display; even in the case the visual angle is increased in the black display state (page 4 lines 15-27 of the specification).

In establishing a prima facie case of obviousness, the Office Action has the burden to show that the reference or combination of references teaches or suggests all of the features of the claims. (See *In re Wilson*, 424 F.2d 1382, 1385 (C.C.P.A. 1970). Applicant respectfully asserts that the Office Action has not met this burden.

Jeon is silent regarding the feature of the thickness of the second retardation layer, which functions as a C plate, being different according to the color of the colored layer for a color filter.

Haim is silent with respect to the feature of forming a retardation layer of a different thickness on the colored layer. Moreover, Haim is silent regarding a retardation layer itself.

The present invention also includes a feature whereby a "first retardation layer whose thickness differs according to a color of the colored layer" can be formed only after coating the liquid crystalline polymer material on the colored layers of each color with different thicknesses.

In contrast thereto, Jeon merely teaches to specifically use a polymer film as the second retardation layer, which functions as a C plate. Jeon is completely silent in using a liquid crystalline polymer as the material for the retardation film.

Amended Claim 17 recites a liquid crystal display comprising a colored layer

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which includes a plurality of rows of light transmissive patterns, whose thickness differs according to its color and a first retardation layer, whose thickness differs according to its color, formed on the colored layer and made of a liquid crystalline polymer, and which functions as a C plate. The second retardation layer, which functions as a positive A plate, also has so-called inverse dispersion characteristics where a refractive index anisotropy thereof in a visible light range becomes smaller with a shorter wavelength. Thus, currently amended Claim 17 has similar features to those of currently amended Claim 11.

Since the currently amended Claim 11 is not obvious over Jeon and Haim as explained above, the same should also apply to amended Claim 17.

In view of the foregoing, Applicant respectfully asserts that the prior art does not teach or suggest each and every feature of the rejected claims. As such, even if the retardation layer taught in Jeon is combined with the color filter of Haim, the resultant combination would fall short of yielding the claimed invention.

Moreover, since independent Claims 11 and 17 are allowable over the prior art, Applicant asserts that all claims depending therefrom are allowable for at least the same reasons, as well as for the features that they recite. As such, Applicant respectfully requests withdrawal of the present rejection under 35 U.S.C. 103(a).

2. Prior Art

Applicant is requested to advise the Examiner whether US 2004/0156001 was commonly owned and assigned to Dai Nippon Printing Co., Ltd. (DNP) at the time the invention was made.

US 2004/0156001 was filed and published in the US prior to the filing of the present application and DNP is the applicant of the application. Therefore, the answer to the Examiner's inquiry is yes.

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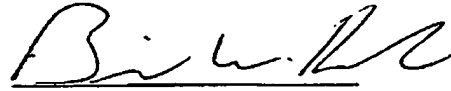
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In light of the foregoing response, all the outstanding objections and rejections are considered overcome. Applicant respectfully submits that this application should now be in condition for allowance and respectfully requests favorable consideration.

Respectfully submitted,

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Date



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